occurred through the dangerous state of the navigation under the arches, the fall being at times as much as five feet, and the perpetually recurring expense of keeping the bridge in repair, added to the rude appearance of the structure itself when contrasted with the fine bridges which had been recently erected over the Thames, suggested, about the beginning of the present century, its entire demolition, and the construction of one more in accordance with the taste and skill of the times, as well as with the princely character of the Corporation of London. Accordingly, surveys, reports, and estimates were made, various plans proposed, some for once more repairing the old bridge, and others for constructing a new one. The most eminent architects and engineers had their attention directed to the subject for upwards of twenty years. At last, in the year 1822, the corporation advertised for plans, and premiums were awarded to three of those sent in. After much discussion both in the city councils as well as in the House of Commons, Mr. Rennie's design was adopted and carried out.

On the 4th of March, 1824, Messrs. Jolliffe and Banks, the contractors for building the new bridge, commenced their operations: on the 15th of June, 1825, the first foundation stone was laid by the late Duke of York: and on the 1st of August, 1831, his late Majesty William the Fourth, and the present Queen Dowager, were pleased to honour the opening ceremony with their presence. Shortly after this event took place, the work of destruction commenced on the old bridge, and within a few months, not a vestige was to be seen of a structure which had been very famous in its day, and the Chronicles* of which illustrate most vividly the manners, customs, and events of London, during a period of six centuries and a half. J. H.

BAILLIE'S SLIDE-VALVE TRANSPARENT VENTILATOR.

THIS ventilator consists first of a series of louvres of glass, which are permanently fixed at a certain inclination, so that the currents of air may be directed upwards and dispersed; and secondly, of a sliding valve, likewise of glass, which regulates the quantity of air admitted, and which when closed, renders the openings perfectly air-tight: the whole is contained in a neat thin frame, which may be readily adapted by a common glazier to any of the panes of a window; the frame itself, when thus fixed, seems to coincide with the sash bars, and the rest of the ventilator being quite transparent, the general appearance is by no means displeasing.

Several advantages arise from having the louvres stationary, instead of being moveable, for example:—First, the draught of cold air is avoided, which in the case of moveable louvres enters through the interval that is required to be left between their ends and the sides of the frame. Secondly, this apparatus has no joints, nor other working parts where the dust can accumulate and become hardened so as to obstruct their action; but it may be closed in a perfectly air-tight manner, even in the most dusty situations. Thirdly, its construction is so simple, that nothing but rough usage could injure it; and if out of order, it may be repaired by any ordinary workman.

The annexed diagrams will serve to shew its appearance and action.

Figure 1 gives an elevation and a vertical section of a sash-window with the ventilator fixed in the position which is thought to be the best for avoiding draughts; *a a*, the fixed inclined glass-louvres; *b c*, the slide-valve for regulating the quantity of air admitted, which is moved by the cords (*d e*), coinciding with, and hidden by the sash-bars, and passing over pullies (as at *f*, *g*, *h*, *j*), to any required position; in the sketch the cord is finally passed over a rack-pully (*n*), in the same way as in ordinary roller-blinds; but, when it is required frequently to pull down the top sash itself, the cord had better be furnished at its lower end with a balance weight instead of passing over a rack pully; *k*, an eye screwed into the sash-bead through which the cord runs; *l*, connecting socket which serves both to unite the cords (as shewn in the sketch), and also to stop (by means of the eye *k*) the slide-valve from being drawn out too far or let down too violently. The slide-valve may, however, be lifted out by hand, for cleaning or any other purpose.

* "The Chronicles of London Bridge," 8vo. 1827.

BAILLIE'S SLIDE-VALVE TRANSPARENT VENTILATOR.

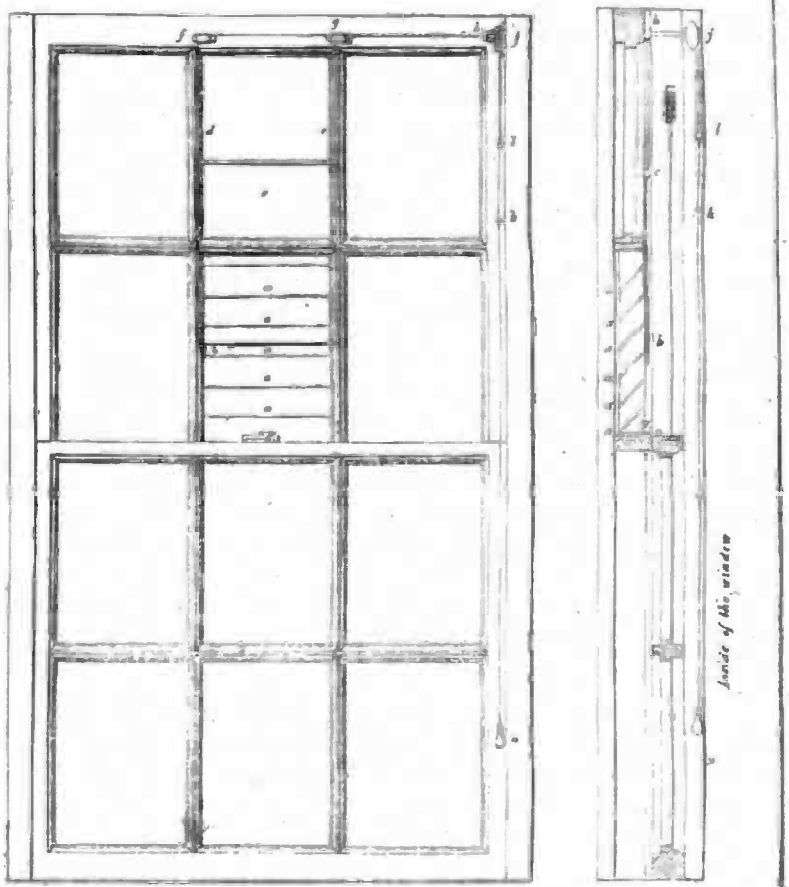

Fig. 1.

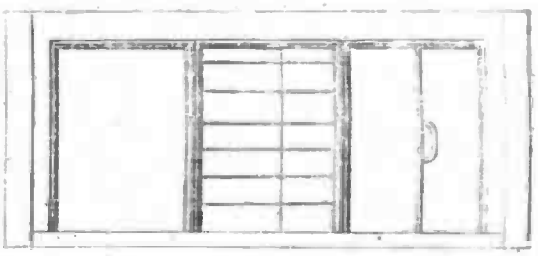

Fig. 2.

Figure 2 shews the mode of adapting the slide-valve to the sashes of basement, attic, or other windows, where the top panes can be easily reached by the hand.

We have had one of these ventilators in operation under our own eye for some time past, and find that it answers the purpose exceedingly well. The cost of them is comparatively trifling.

HITCH'S PATENT DRAIN.

SIR,—With the remarks contained in a letter on the subject of house drains in the last number of THE BUILDER I fully agree, but as drain-pipes are liable to fracture, permit me to call your attention, and through your paper, that of your readers, to a description of drain which I have used for some years, and have always found to answer admirably, and at the same time at less cost than drains of common brickwork.

I allude to Hitch's Drain bricks, for which a patent has been obtained. They have been in use some years, but are not so well known as they deserve to be.

Each brick is 13 inches long, segmental and wedge shaped, and is rebated at the ends, so that they may fit into each other. For a 9-inch drain, four bricks form a complete circle or gun-barrel-drain; they fit quite closely together, a very small quantity of mortar or cement being necessary, and the labour is very little. There are two sinkings in the back of each for the workmen to handle them by; these also permit a better action of the fire in burning, and the inside is quite smooth. Four of the bricks form a 9 inch drain, at a cost of 11d. per foot. Six of the bricks form a 12-inch drain, at a cost of 1s. 4d. per foot.

The maker is Mr. Hitch, of Ware, Herts, who has had for some time past a depôt for their sale at Lindsey Wharf, Chelsea. I think it only an act of justice to the ingenious manufacturer to mention them, as I consider them the best drains ever invented, and shall ever use them.—I am, Sir, &c.

A BUILDER OF THIRTY YEARS' STANDING.

Lambeth, July 1st, 1845.

*** We have ourselves had a long experience of the drain-bricks, and can bear witness to their great excellence.

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